

### ABSTRACT

A catalyst system for the polymerization of olefins comprising the product obtained by contacting:

- (A) a metallocene complex;
- (B) an organometallic aluminium compound of formula (II):



wherein Ar is a substituted or unsubstituted aryl group having from 6 to 20 carbon atoms;  $\text{R}^4$  is a linear or branched, saturated or unsaturated,  $\text{C}_1\text{-C}_{10}$  alkyl,  $\text{C}_6\text{-C}_{20}$  aryl,  $\text{C}_7\text{-C}_{20}$  arylalkyl or  $\text{C}_7\text{-C}_{20}$  alkylaryl;  $\text{R}^5$  is hydrogen or a linear or branched, saturated or unsaturated,  $\text{C}_1\text{-C}_{10}$  alkyl,  $\text{C}_6\text{-C}_{20}$  aryl,  $\text{C}_7\text{-C}_{20}$  arylalkyl or  $\text{C}_7\text{-C}_{13}$  alkylaryl group;

$x = 2$  or  $3$ ;  $y = 3-x$ ; and

- (C) water;

the molar ratio (B)/(C) being between 1:1 and 100:1. These catalysts show an improved activity with respect to known catalysts, wherein different aluminium compounds are used.